

Applicant and Applicant's representative thank Examiner Tung for the courtesy of a telephone conference of March 8, 2001 in connection with the application.

In response to the Advisory Action, Applicant respectfully points out that the range limitations added to claim 34 are fully supported in the specification as filed. In the amended claim 34, the second and third nucleic acids each consists of a nucleotide sequence within SEQ ID NO: 1 that encodes respectively the amino acid residues of position 24 to 126, and the amino acid residues of position 1067 to 1185 of SEQ ID NO: 2. The amino acid residues of position 24 to 126 of SEQ ID NO: 2 encode the IG-1 domain of DS-CAM as indicated in Figure 2. The amino acid residues of position 1067 to 1185 encode the FbN-3 domain of DS-CAM as indicated in Figure 2. The positions of amino acid residues 24 and 1067 are provided in Figure 2. Although Figure 2 does not explicitly recite the amino acid positions 126 and 1185 which mark the end of the respective domains, the boundaries of the domains are clearly delineated in the figure by the use of a new line to indicate the beginning of the next domain and the recitation of the first amino acid residue of the next domain. The corresponding segments of nucleotide sequences of SEQ ID NO: 1 that encode these two domains are presented in the Sequence Listing submitted with the specification (see page 65 to 72) which shows the triplet codons and the corresponding amino acid residues of the DS-CAM gene. Thus, one of skill in the art can readily determine the nucleotide sequences of the second and third nucleic acids of claim 34 by inspecting SEQ ID NO: 1. Accordingly, Applicant respectfully emphasizes that the range limitations in amended claim 34 are fully supported in the specification as filed. The amendments to the claim do not raise the issue of new matter and should thus be entered in the present application.

Furthermore, Applicant submits that an additional search is not required because the nucleotide sequences delimited by the added range limitations have already been searched by the Examiner when the entire nucleotide sequence of SEQ ID NO: 1 was searched. The segments of nucleotide sequence of SEQ ID NO: 1 delimited by the added limitation of claim 34 are 309 bp and 357 bp in length. In that previous search (copies of the results of which have been enclosed with the Office Action dated August 16, 1999), the Examiner has identified two nucleotide sequences in Genbank (309 and 321 bp in length) that display a greater than 95% homology to SEQ ID NO: 1. Applicants respectfully submit that if there are other nucleotide sequences in the sequence database that display a similarly high degree of homology to the nucleotide sequences of SEQ ID NO: 1 as delimited by the added

range limitations of claim 34, such nucleotide sequences would have been clearly identified in the previous search. Thus, Applicant respectfully submits that an additional search would be redundant and is not required.

In view of the foregoing, Applicant respectfully submits that there are no issues of new matter and the previously filed amendments do not necessitate an additional search.

CONCLUSION

Applicant respectfully requests that the amendments of the Amendment Under 37 C.F.R. § 1.116 filed November 8, 2000 be entered and made of record in the instant application. An allowance of the claims is earnestly requested. Applicant believes that each ground for rejection or objection has been successfully overcome or obviated and that the application is in condition for allowance. If any issues remain in connection herewith, the Examiner is respectfully invited to telephone the undersigned to discuss the same.

Respectfully submitted,

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Enclosures

Exhibit A

Pending Claims for
Application Serial No. 08/956,991
as of November 8, 2000

1. An isolated nucleic acid comprising (a) a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or 11; and (b) the complement of the nucleotide sequence of (a).
31. A vector comprising the isolated nucleic acid of claim 1.
32. An isolated cell containing the nucleic acid of claim 1 or 31.
33. An isolated intronless nucleic acid comprising a nucleotide sequence which hybridizes under high stringency conditions to a second nucleic acid encoding the amino acid sequence set forth in SEQ ID NO:11, wherein said high stringency conditions comprise hybridizing in 5X Denhardt's solution, 5X SSPE and 0.2% sodium dodecylsulfate at 42°C, followed by washing in 0.1X SSPE and 0.1% Sodium dodecylsulfate at 65°C.
34. An isolated nucleic acid that hybridizes under high stringency conditions to a second nucleic acid consisting of the nucleotide sequence set forth in SEQ ID NO:1 that encodes amino acids 24 to 126 of SEQ ID NO:2 and a third nucleic acid consisting of the nucleotide sequence set forth in SEQ ID NO:1 that encodes amino acids 1067 to 1185 of SEQ ID NO:2, wherein said high stringency conditions comprise hybridizing in 5X Denhardt's solution, 5X SSPE and 0.2% sodium dodecylsulfate at 42°C, followed by washing in 0.1X SSPE and 0.1% Sodium dodecylsulfate at 65°C.
35. An isolated nucleic acid comprising a nucleotide sequence which hybridizes under high stringency conditions to a second nucleic acid consisting of the nucleotide sequence set forth in SEQ ID NO:7 or SEQ ID NO:8, wherein said high stringency conditions comprise hybridizing in 5X Denhardt's solution, 5X SSPE and 0.2% sodium dodecylsulfate at 42°C, followed by washing in 0.1X SSPE and 0.1% Sodium dodecylsulfate at 65°C.

36. A vector comprising the isolated nucleic acid of claim 33, 34, or 35.
37. An isolated cell containing the nucleic acid of claim 33, 34, or 35.
38. An isolated nucleic acid comprising a nucleotide sequence which encodes a polypeptide comprising at least one of the amino acid sequences selected from the group consisting of: amino acids 1-23, 24-126, 127-225, 226-316, 317-409, 410-506, 507-603, 604-697, 698-792, 793-887, 888-983, 984-1067, 1068-1185, 1186-1281, 1282-1375, 1376-1471, 1472-1594, 1595-1616, and 1617-1910 of SEQ ID NO:2.
39. A vector comprising the isolated nucleic acid of claim 38.
40. An isolated cell containing the nucleic acid of claim 38 or 39.
41. An isolated nucleic acid molecule comprising a nucleotide sequence set forth in SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, nucleotides 453-6185 of SEQ ID NO:1 or nucleotides 453-5168 of SEQ ID NO:1.
42. A vector comprising the isolated nucleic acid of claim 41.
43. An isolated cell containing the nucleic acid of claim 41 or 42.
44. An oligonucleotide comprising at least 15 nucleotides of (a) a nucleotide sequence that encodes the polypeptide of SEQ ID NO:11; (b) the nucleotide sequence set forth in SEQ ID NO. 7 or 8; or (c) the complement of the nucleotide sequence of (a) or (b).
45. The oligonucleotide of claim 44 wherein the oligonucleotide sequence consists essentially of SEQ ID NO:5 or SEQ ID NO:6.
46. A kit for detecting the presence of a nucleic acid in a sample comprising in a package at least one oligonucleotide of claims 44 or 45.
47. The isolated nucleic acid of claim 1, 33, 34, 35, 38 or 41 which is cDNA.

48. The isolated nucleic acid of claim 1, 33, 34, 35, 38 or 41 which is RNA.

49. A method for making of a Down Syndrome-Cell Adhesion Molecule polypeptide or fragment thereof, said method comprising the steps of culturing the cell of claim 32, 37, 40 or 43 under conditions suitable for expression of said Down Syndrome-Cell Adhesion Molecule protein, and isolating the expressed Down Syndrome-Cell Adhesion Molecule protein.